

## REMARKS

### INTRODUCTION

In accordance with the foregoing, claims 10-13 have been cancelled. Claims 1-9 and 14 are pending and under consideration.

### CLAIM REJECTIONS – 35 USC 102

Claims 1-14 were rejected under 35 USC 102(a, e) as being anticipated by Song et al. (US 6,487,472) (hereinafter "Song").

Song discloses a semiconductor device manufacturing facility with a diagnosis system.

Song discloses various fabrication systems 1 to N, a control system 20, and a diagnosis system 10. The control system 20 applies a control signal for controlling the operation of the various fabrication systems 1 to N corresponding to a sensing signal from the various fabrication systems 1 to N, or an input from a host computer. The control system 20 is connected to the various fabrication systems 1 to N for carrying out various processes including oxidation, deposition, diffusion, ion-implantation, photo-etch, etc. via a certain transmission line. The fabrication systems 1 to N send a sensing signal to the control system 20 and the diagnosis system 10 showing the state of the fabrication processes and the operating parameters (e.g., temperature, time, pressure, concentration, power, etc.), while the above fabrication processes are operating. Song, 6:48-6:63.

In Song, a sensing signal showing various fabrication parameters (e.g., pressure, temperature, voltage, gas amount, etc.), for the fabrication process being carried out in the fabrication systems 1 to N, and the control signal from the control system 20, are transferred sequentially to a multiplexer 21 through a first input unit 11. A control part 23 of a control means 15 of the diagnosis system 10 stores the information of the sensing signal in a first memory device 26. At the same time, the control part 23 analyzes the fabrication process and the operation of the fabrication systems 1 to N, and displays the results in the display part 28 with at least one of values, graphs, waveforms, text, diagrams, and the like. Song, 8:17-8:29.

#### Claims 1-9 and 14

Claim 1 recites: "...diagnosing an operational state of the plurality of sub-modules prior to beginning the semiconductor device manufacturing process..." In contrast to claim 1, Song discloses performing diagnosing while the fabrication process is operating. In claim 1, diagnosing is performed prior to beginning the semiconductor device manufacturing process and

accordingly can prevent a malfunction in the semiconductor manufacturing process.

Further, the Examiner stated that Fig. 2 of Song discloses "diagnosing an operational state of sub-modules prior to beginning the semiconductor device manufacturing system" as is recited in claim 1. However, Fig. 2 merely shows that the fabrication systems send a sensing signal to the diagnosis system while the fabrication process is operating, but does not teach or suggest a distinct feature of diagnosing prior to beginning the process.

Claims 2-9 and 14 depend on claim 1 and are therefore believed to be allowable for at least the foregoing reasons.

Withdrawal of the foregoing rejection is requested.

**Claims 10-13**

Claims 10-13 have been cancelled.

**CONCLUSION**

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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